

REMARKS

Reconsideration of this application is requested in view of the amendments to the claims and the remarks presented herein.

The claims in the application are claims 1 to 7, no other claims having been presented. Claim 3 has been rewritten in independent form and is now believed to be allowable. Since claim 7 is dependent thereupon, this is also deemed to be allowable.

Applicant's attorney wishes to thank the Examiner in charge of the application for the courtesies extended to him at the interview on April 29, 2003 at which time, the advisory action of February 10, 2003 was discussed.

Claims 1, 2 and 4 to 7 stand rejected under 35 USC 102 as being anticipated by or under 35 USC 103 as being obvious over the Tonogai patent. The Examiner states the reference shows a linear rolling bearing comprising a guide carriage with a U-shaped cross section in Figure 8 having a U-crossbar and two U-legs whereby the guide carriage forms a carriage cavity and partially surrounds a guide rail while being slidably supported by balls on two longitudinal sides of the guide rail, each U-leg of the guide carriage having an inner surface opposing the guide rail, a ground raceway with possibly a quarter circle cross-section for the balls and stop surface 21 having a retaining contour for a guide member 50 containing the balls B configured on a guide rail-distal outer surface of

each U-leg of the guide carriage. The Examiner deems it would have been obvious to have constructed Tonogai's linear rolling bearing using a one step process to save cost and time.

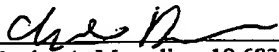
Applicant respectfully traverses these grounds of rejection since the Tonogai patent neither anticipates nor renders obvious Applicant's invention. The reference discloses a linear ball bearing having a guide carriage designated as a bearing body which has a leg section with an upper groove with an approximately semi-circular cross-section for load bearing balls and a lower groove with an approximately quarter circle cross-section for the load bearing balls. A drawback of this configuration lies in the continuation of the radius of the upper groove up to the vertical inner wall of the leg section which necessarily means that for making the upper groove by grinding a small grinding wheel must be used.

Because of the semi-circular cross-section of the upper groove for the load bearing balls, Tonogai is unable to use a grinding wheel corresponding to Applicant's construction and claim 1 calls for the raceway 10 with an approximately quarter circle cross section for the balls 3 to be made by a grinding wheel 18 whose diameter is larger than a diagonal dimension of the carriage cavity and whose axis of rotation 19 is situated outside of the guide carriage 1 thereby forming an acute angle α with an axis of symmetry 20 of the guide carriage 1. The advantage obtained by Applicant using a grinding wheel having a large diameter is much in the description beginning at the last paragraph of page 1 through line 3 of page 2 stating that at the same speed of rotation, a

higher peripheral speed is obtained with the grinding wheel having a large diameter rather than a wheel having a small diameter. With the large diameter, a higher grinding performance and a prolongation of the duration of the wheel are obtained. The rotational speed of the grinding spindle cannot be infinitely increased because this would lead to a destruction of the bearings. This advantage is not disclosed by Tonogai and therefore, it is deemed that claims 1, 2 and 4 to 6 are not anticipated or rendered obvious by the reference. Therefore, withdrawal of this ground of rejection is requested.

In view of the amendments to the claims and the above remarks, it is believed that the claims clearly point out Applicant's patentable contribution and favorable reconsideration of the application is requested.

Respectfully submitted,
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Enclosures